

REMARKS

Reconsideration of this application is respectfully requested. Upon of the foregoing Amendment, claims 1, 2, 5-10, 13-61, 63, 65, and 66 are pending. Claims 3, 4, 11, 12, 62, and 64 have been cancelled. Claims 1, 5, 9, and 47 are amended herein. All of the pending claims stand rejected. Those amendments are moot for those claims that have been cancelled.

The Amendment accompanying this response is believed to introduce no new matter and its entry is respectfully requested. Claim 1 has been amended to incorporate the limitation of cancelled claim 4. Claims 5 and 9 have been amended to depend from claim 1 rather than claim 4. Claim 47 has been amended to incorporate the limitations of claims 62 and 64. Support for these amendments may be found throughout the specification and claims as filed, and particularly in paragraph [0014].

REJECTIONS UNDER 35 U.S.C. § 112

Claims 1, 2 and 13-61 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly claiming subject matter not enabled by the specification. In particular, the Office Action suggests that the specification is not enabling for all kinds of solid acid catalysts.

The amended claims presented in this Response limit the solid acid catalysts to one or more of acidic ion exchange resins and zeolite powder. The Office Action acknowledges that these solid acid catalysts are enabled for use in the specification. The rejection should be withdrawn, and the claims should be allowed.

REJECTIONS UNDER 35 U.S.C. § 103(a)

All pending claims stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Hartmann (U.S. Pat. No. 3,454,603) in view of Feldmann, et al. (U.S. Pat. No. 4,564,692) and Brinegar, et al. (WO 00/14081). Applicants respectfully submit that the Office Action does not consider either of the arguments made by the applicant in the previous response. Hartmann cannot be combined with Feldmann. Even if Hartmann could be combined with Feldmann, the cited documents do not teach performance of the initial dehydration without a solvent.

Hartmann teaches away from Feldmann. Hartmann states that processes such as that used in Feldmann will not work to purify 1,4-3,6-dianhydro-D,L-glucitol. "The 1,4-3,6-dianhydro-D,L-glucitol is of such a nature that it is not readily crystallized, **thus crystallization is not used as a method to purify** 1,4-3,6-dianhydro-D,L-glucitol." (Hartmann, Col. 2, ln. 72 - Col.3, ln. 3) (emphasis added). No *prima facie* case of obviousness that relies on a combination of Hartmann and Feldmann may be created, because by their own terms they cannot be combined. The rejection should be withdrawn for all pending claims.

The combination of Hartmann, Feldmann, and Brinegar does not include all of the limitations of the independent claims. In particular, the independent claims of this application require that the initial dehydration be performed without a solvent. The absence of a solvent is not suggested or stated in any of the cited publications. Hartmann teaches the use of soluble acid catalysts, and the use of those catalysts necessitates addition of the solvent water to the initial reaction mixture. (Hartmann, Col. 2, ln. 41-43; see also Example 1 and Example 5 [p-toluenesulfonic acid]) Feldmann, while not enabled for production of anhydrosugar alcohols, also notes that sugar alcohol dehydration occurs in the presence of a solvent in the prior art (Feldmann, Col. 1, ln. 26) Brinegar states that solvents are included in its process (Brinegar, page 4, line 17; see also Abstract and Claim 1).

Even if one skilled in the art were motivated to combine Hartmann, Feldmann and Brinegar and even if such a combination were successful, the combination would not include the "without a solvent" limitation of the instant claims. The claims of this application can not be rendered obvious by any combination of references that does not include all of the limitations of the claims.

There is no *prima facie* case of obviousness. Hartmann and Feldmann cannot be combined. Even if combined, the purported references would not teach all of the limitations of the claims. For at least these reasons, the rejection under Section 103(a) should be withdrawn. Applicants respectfully request that the rejection be withdrawn and the claims allowed.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and as such, the Application is in condition for allowance. If the Examiner believes that personal communication would expedite prosecution of this Application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

Dated: December 7, 2006



Duane A. Stewart III  
Reg. No. 54,468  
BUCHANAN INGERSOLL & ROONEY PC  
One Oxford Centre  
301 Grant Street, 20th Floor  
Pittsburgh, PA 15219-1410  
(T) 412-562-1622  
(F) 412-562-1041  
duane.stewart@bipc.com